

Abstract

In the partial thermochemical vacuum treatment of metallic
5 workpieces (1), in particular in the carburization and case
hardening of workpieces (1) of case-hardening steel in a
carbon-containing atmosphere, surface regions (3, 4, 5, 6)
to be treated and surface regions not to be treated abut
one another. In order to restrict the surface treatment to
10 the cavities (2) of the workpieces (1) the external surface
regions not to be treated are covered by reusable
dismountable mould bodies (11) of a temperature-resistant
material with at least one mould cavity (15). In this
connection the mould body (11) consisting of a lower
15 part (12) and an upper part (13) with openings (12b, 13b)
encloses several workpieces (1) in such a way that no
treatment takes place on the external surface regions of
the workpieces (1). An electrically conducting mould
body (11) is suitable in particular for a thermochemical
20 treatment under the action of a plasma. Graphite or CFC is
used as material for the mould bodies (11). In such a
mould body the workpieces can be subjected before the
carburization to a heating procedure, as well after the
carburization to procedures such as diffusion, gas
25 quenching and optionally further treatments such as deep
cooling and/or annealing.

(Figure 1)